

**SMART  
SOLUTIONS**

## **ELECTRONICS ASSEMBLY**

Your product quality is our drive





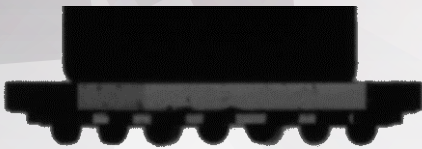
# KEY FEATURES

*Your product **quality** is our drive*



## Single Pick, Single Place

Having full control of your process requires handling one component at a time. All steps from look-before-pick to pick, motion, place and look-after-place can be fully optimized, controlled, verified and dedicated to that single component, making it the most reliable process possible in the industry.



## Fully controlled pick and place process

- No missing components: every component is continuously monitored throughout the pick-and-place process by means of side view alignment and vacuum flow sensors. This ensures all components are actually placed at the right location;
- No cracked components: unique closed-loop active force measurement and feedback ensures the correct placement force is applied to every single placement. The placement force builds up exactly to the set static force; and
- Continuous board height measurement allows for high speed placements at the highest quality.

## Changeover flexibility

iFlex offers best-in-class NPI and changeover flexibility, regardless of volume and board sizes:

- Changeover in less than five minutes;
- Independent dual lane;
- Hot feeder swap;
- Random feeder placement;
- Intelligent product grouping; and
- Engineering change flexibility.

## Error-free production from the very first board

Quality begins before even producing the first board. The right NPI and setup tools ensure that all the boards come out right, the first time:

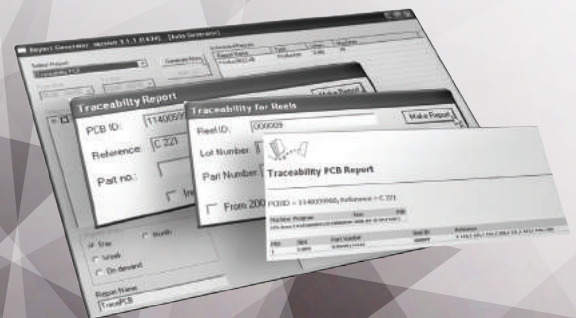
- Generates error-free programs;
- Defines parts and programs once;
- Error-free setups;
- Manages your material;
- Minimizes downtime between jobs;
- Fast feeder preparation;
- Closed-loop parts roundtrip; and
- Reacts fast to last moment NPI changes.



## 100% accurate component traceability

The Setup Assistant guarantees error-free set-ups and enables full traceability:




- Material management;
- Material verification;
- Single barcode scan;
- 100% traceability from source to target material;
- Forced Feeder Re-scan;
- Single barcode scan; and
- Traceability data / report.








# SYSTEM SPECIFICATIONS



	 FLEX T4-T2	 FLEX H1	 X 502 / HYBRID 5
Maximum output per hour	70k	9k	165k
Maximum output IPC 9850/9850A	51k	7.1k	121k
Placement accuracy @ Cpk > 1	40 µm for passives	40 µm for passives 25 µm for QFP	35 µm for passives 25 µm for QFP 18 µm for LED (*) 18 µm for QFP/BGA (*)
Minimum component size	0.4 x 0.2 mm (01005)	0.6 x 0.3 mm (0201)	0.25 x 0.125 mm (0201m)
Maximum component size	45 x 45 mm (1.77 x 1.77")	120 x 52 mm (4.72 x 2.05")	45 x 45 mm (1.77 x 1.77")
Maximum component height	15 mm (0.60")	25 mm (0.98")	10.5 mm (0.41")
Optional height	21 mm (0.83")	50 mm (1.97")	12 mm (0.47")
Programmable placement force (in steps of 0.1 N)	1.5 to 8 N	4.0 to 60 N	0.3 to 8 N
Minimum board size	50 x 50 mm (2 x 2")	50 x 50 mm (2 x 2")	50 x 50 mm (2 x 2")
Minimum board size (optional)	-	-	50 x 25 mm (2 x 1")
Maximum board size:			
- Single lane	555 x 558 mm (21.8 x 22")	555 x 558 mm (21.8 x 22")	515 x 390 mm (20.28 x 15.35")
- Dual lane (per lane)	555 x 254 mm (21.8 x 10")	555 x 254 mm (21.8 x 10")	-
- Dual lane in Single lane mode	555 x 460 mm (21.8 x 18")	555 x 460 mm (21.8 x 18")	-
Maximum optional board length	845 mm (33")	845 mm (33")	1500 mm (59.06")
Maximum optional board width	-	-	457 mm (18")
Board thickness	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")	0.3 to 6 mm (0.01 to 0.24")
Application specific board transport types	-	-	Vacuum transport, carrier transport
Automatic toolbit exchange	Nozzles	Nozzles, grippers	Nozzles
Maximum tape feeding positions (8 mm)	82 single tapes 162 twin tapes	81 single tapes 162 twin tapes	130 single tapes 260 twin tapes
Feeding options (other feeder types on request)	Tape, stick	Tape, stick, tray, tubes	Tape, waffle pack, tray, wafer, others
Open MES data interfaces	CamX, others on request	CamX, others on request	CamX, others on request
Footprint (L x W)	2,340 x 1,844 mm (92.13 x 72.60")	1,170 x 1,844 mm (46.06 x 72.60")	3,720 x 1,705 mm (146.46 x 67.13")



	 FLEX T2-T2	 FLEX T2-T2-H1	 FLEX T4-T4-T2-H1
Maximum output IPC 9850/9850A	48,600 placements per hour	55,600 placements per hour	131,300 placements per hour
Maximum tape feeding positions (8 mm)	162 324	243 485	326 647
Maximum # of Tray components	4	34	32
Maximum component size	45 x 45 mm (1.77 x 1.77")	120 x 52 mm (4.72 x 2.05")	120 x 52 mm (4.72 x 2.05")
Maximum component height	15 mm (0.59")	25 mm (0.98")	25 mm (0.98")
Optional	21 mm (0.83")	50 mm (1.97")	50 mm (1.97")
Footprint (L x W)	2,340 x 1,844 mm (92.13 x 72.60")	3,510 x 1,844 mm (138.19 x 72.60")	4,680 x 1,844 mm (184.25 x 72.60")





	X 502 -  FLEX T2	X 502 -  FLEX T2-H1	LED FA ( HYBRID 5)
Maximum output IPC 9850/9850A	145,300 placements per hour	152,300 placements per hour	104,000 placements per hour
Maximum tape feeding positions (8 mm)	211 422	292 583	130 260
Maximum # of Tray components	2	32	2
Maximum component size	45 x 45 mm (1.77 x 1.77")	120 x 52 mm (4.72 x 2.05")	17.5 x 17.5 mm (0.69 x 0.69")
Maximum component height	15 mm (0.59")	25 mm (0.98")	10.5 mm (0.41")
Optional	21 mm (0.83")	50 mm (1.97")	12 mm (0.47")
Footprint (L x W)	4,890 x 1,844 mm (192.52 x 72.60")	6,060 x 1,844 mm (238.58 x 72.60")	3,720 x 1,705 mm (146.46 x 67.13")

## Services

### Maintain your quality

Knowing your service requirements are unique, K&S tailors a service solution to meet your changing needs. K&S is recognized as the industry's premier service provider.

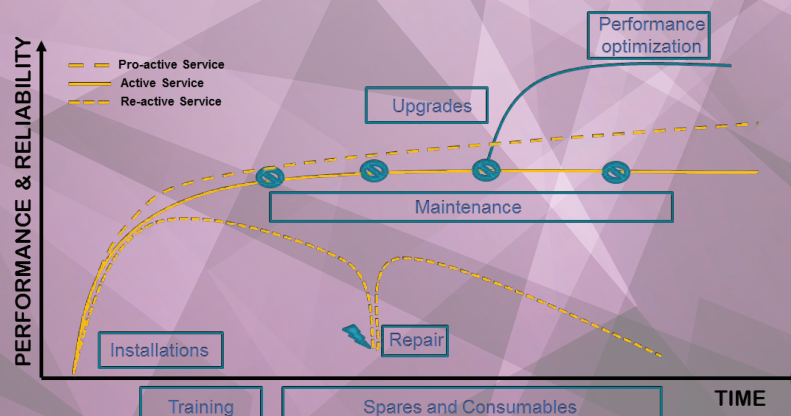
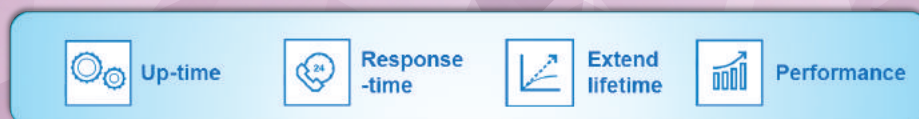
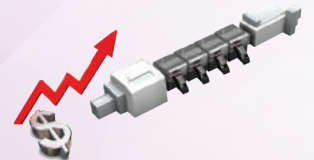
Machine accuracy verification service is one of our services that guarantees the quality of your equipment as long as you have it.

### Assessment Services

Recommendations for guaranteed efficiency and yield improvements follow an on-site assessment by K&S.

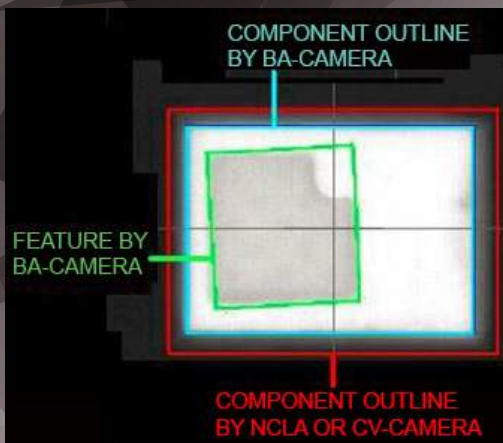
### Start-up and Transition Support

- Training by certified trainers;
- Professional, fast installation; and
- Dedicated project management & worry free transition service





# OPTIONAL FEATURES



## LED Feature Alignment

Perfect optical performance of automotive head lights requires highly accurate alignment of an LED's light emitters. LED Feature Alignment on the high accuracy Twin Placement Robot makes any automotive lighting challenge look like an easy job. Ultimate flexibility combined with the best accuracy in the market.



## LED tube placement

Based on proven and truly scalable technology, the ix 502 1500 mm brings the ideal solution for high speed, high quality LED retrofit tube manufacturing. In fact, because it is compatible with all existing ix 502 features and options, it offers so much more.

- Boards up to 1500 mm;
- Full LED Binning support;
- Full LED nozzle range; and
- Advanced LED placement process technology



## Tall components

iFlex H1 now places tall connectors and other components. This can enable to pull large components from manual insertion and selective soldering into your reflow line.

Once again: we're setting the industry standard for process control in this application area.

Component range: 50 mm height components can be placed on panels, with premounted components of 50 mm height.

